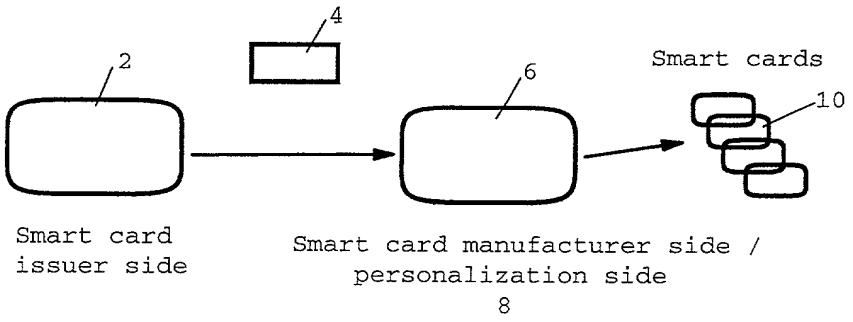
4
2
6
Smart cards
10
Smart card
issuer side
Smart card manufacturer side /
personalization side
8

FIG. 1

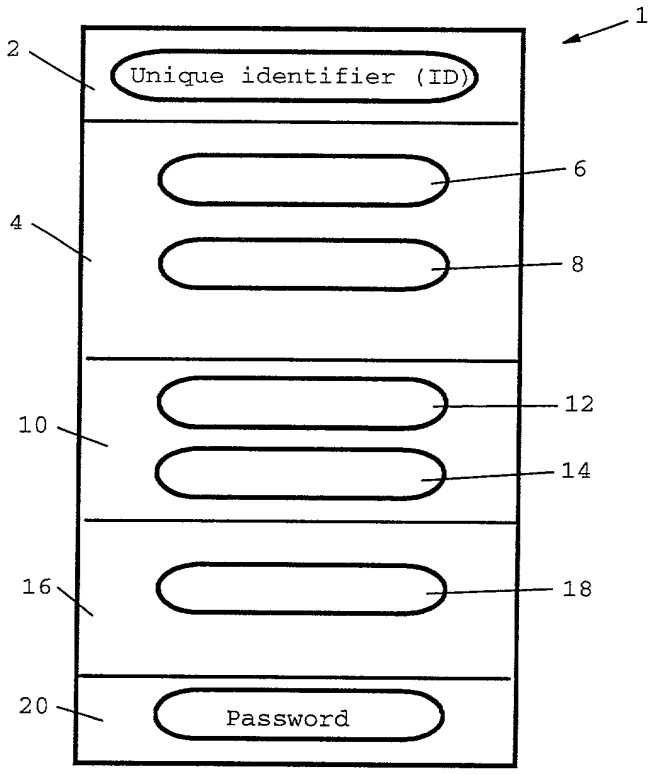
1
2
Unique identifier (ID)
6
4
8
12
10
14
16
18
20
Password

FIG. 2

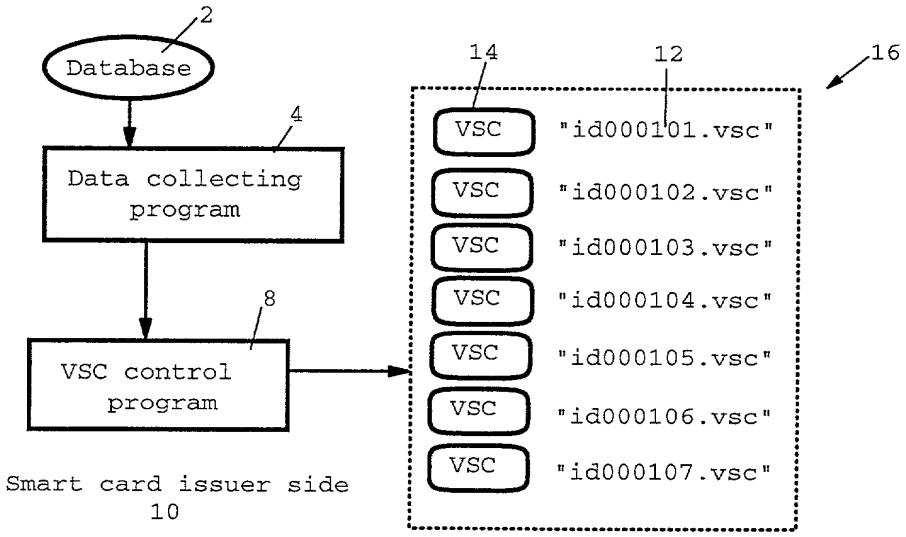
2
Database
4
Data collecting program
8
VSC control program
Smart card issuer side
10
14
12
16
VSC "id000101.vsc"
VSC "id000102.vsc"
VSC "id000103.vsc"
VSC "id000104.vsc"
VSC "id000105.vsc"
VSC "id000106.vsc"
VSC "id000107.vsc"

FIG. 3

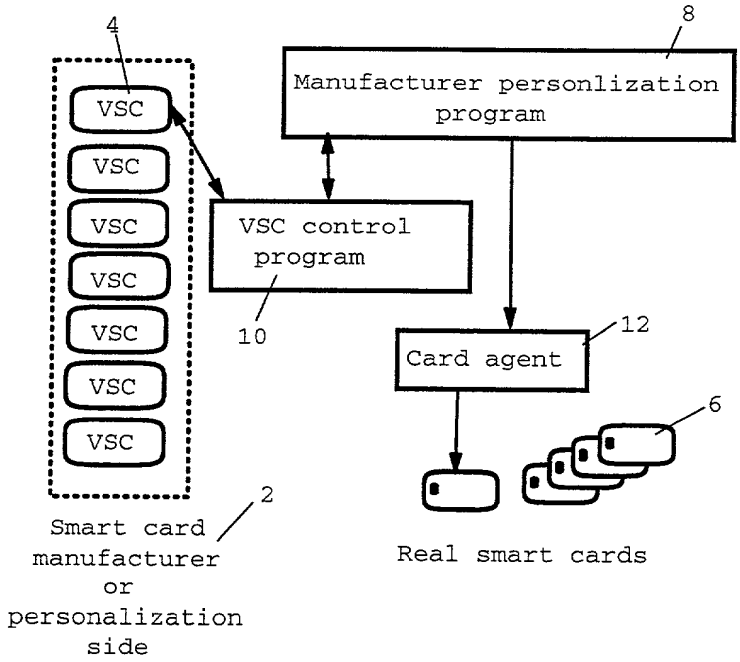
4
VSC
VSC
VSC
VSC
VSC
VSC
VSC
2
Smart card manufacturer or personalization side
8
Manufacturer personlization program
VSC control program
10
12
Card agent
6
Real smart cards

FIG. 4

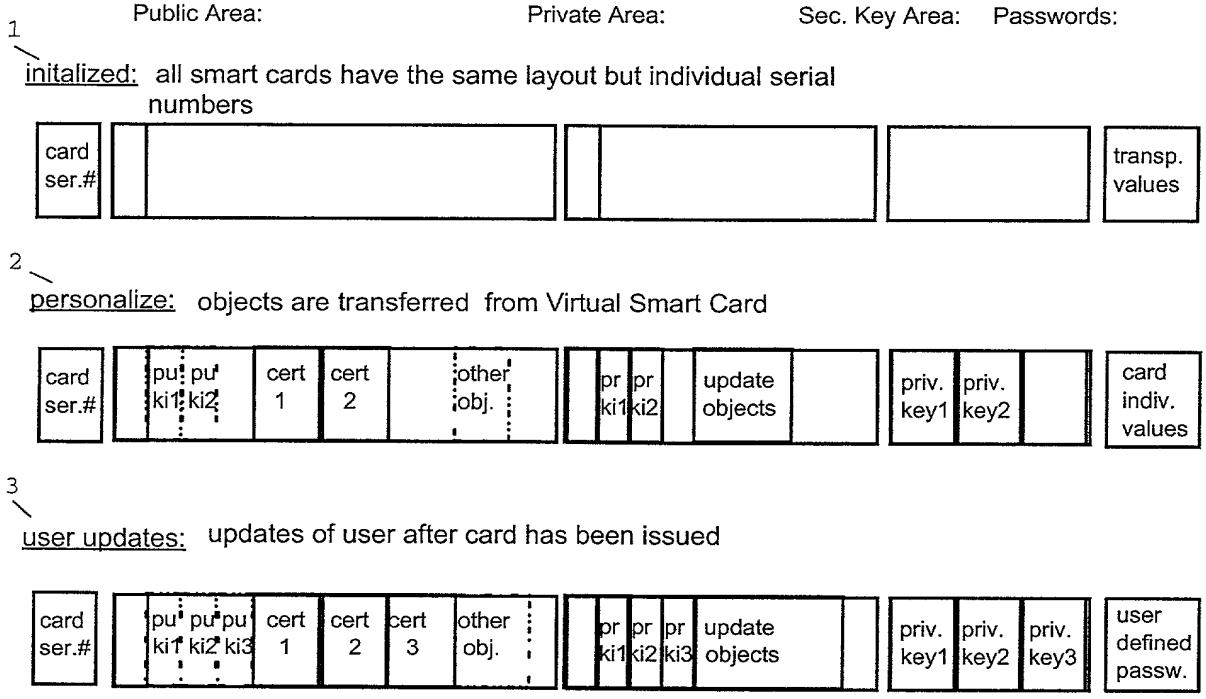
Public Area:
Private Area:
Sec. Key Area:
Passwords:
1
initalized: all smart cards have the same layout but individual serial numbers
card ser.#
transp. values
2
personalize: objects are transferred from Virtual Smart Card
card ser.#
pu ki1
pu ki2
cert 1
cert 2
other obj.
pr ki1
pr ki2
update objects
priv. key1
priv. key2
card indiv. values
3
user updates: updates of user after card has been issued
card ser.#
pu ki1
pu ki2
pu ki3
cert 1
cert 2
cert 3
other obj.
pr ki1
pr ki2
pr ki3
update objects
priv. key1
priv. key2
priv. key3
user defined passw.

FIG. 5

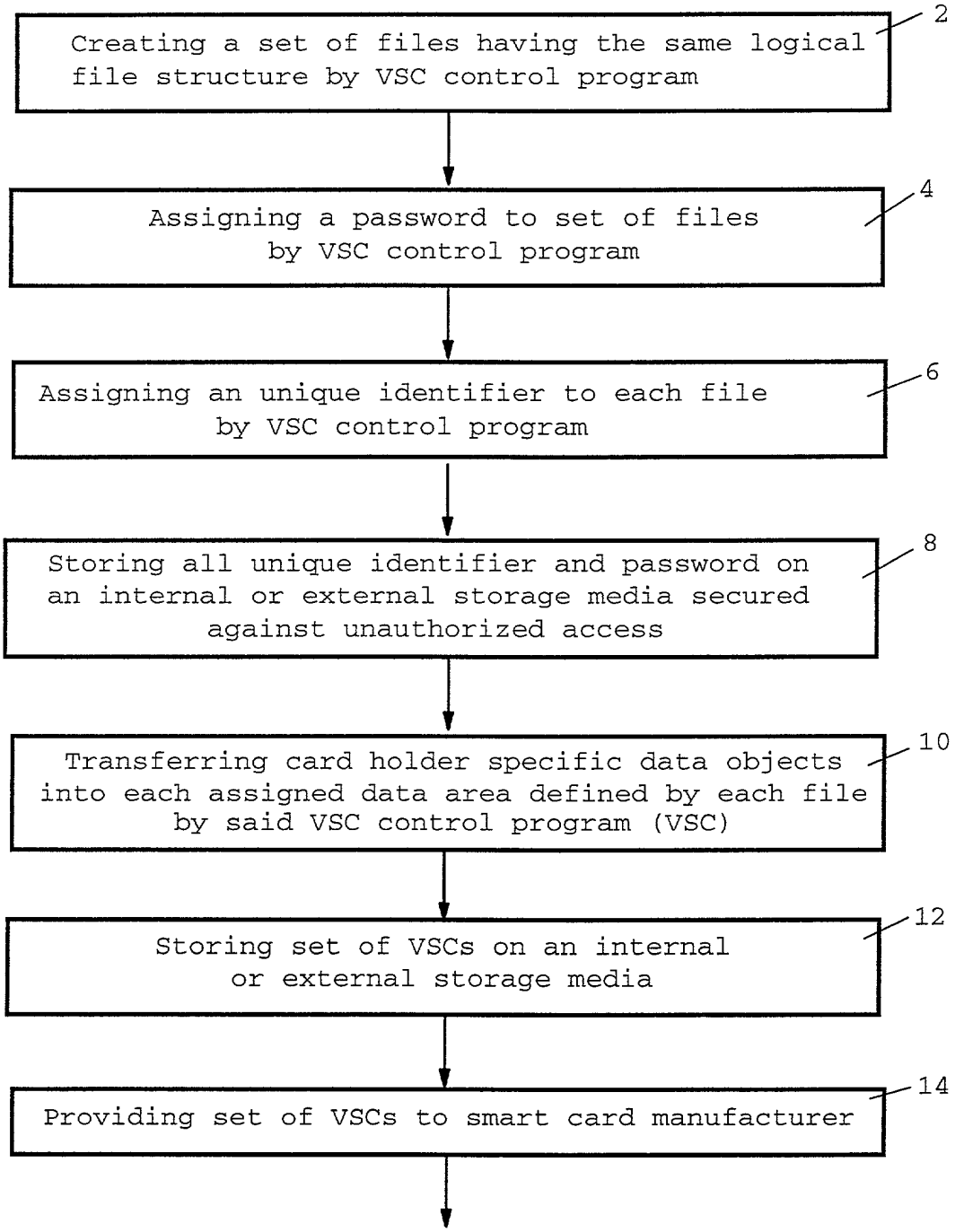
Creating a set of files having the same logical file structure by VSC control program
2
Assigning a password to set of files by VSC control program
4
Assigning an unique identifier to each file by VSC control program
6
Storing all unique identifier and password on an internal or external storage media secured against unauthorized access
8
Transferring card holder specific data objects into each assigned data area defined by each file by said VSC control program (VSC)
10
Storing set of VSCs on an internal or external storage media
12
Providing set of VSCs to smart card manufacturer
14

FIG. 6A

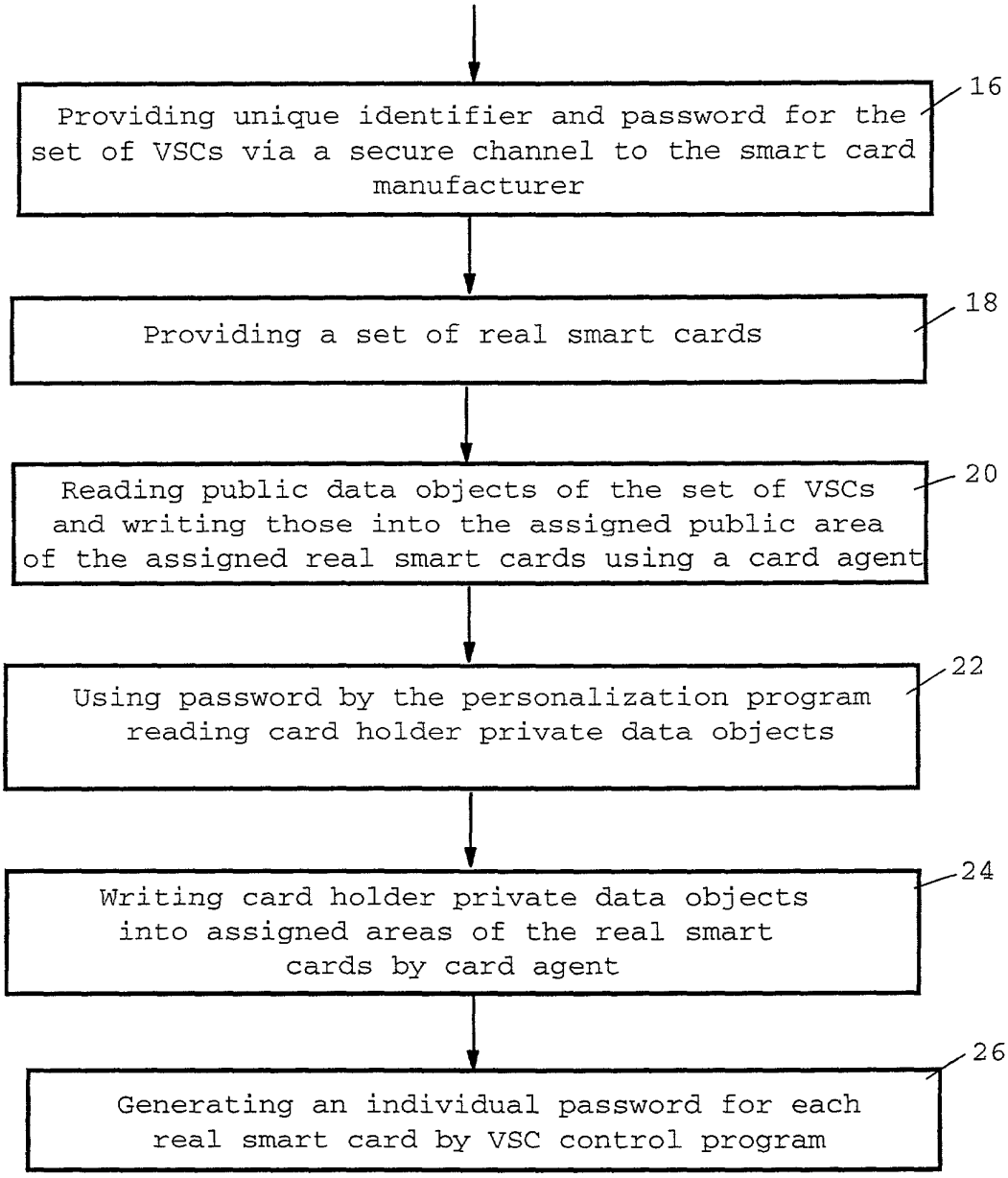
Providing unique identifier and password for the set of VSCs via a secure channel to the smart card manufacturer
16
Providing a set of real smart cards
18
Reading public data objects of the set of VSCs and writing those into the assigned public area of the assigned real smart cards using a card agent
20
Using password by the personalization program reading card holder private data objects
22
Writing card holder private data objects into assigned areas of the real smart cards by card agent
24
Generating an individual password for each real smart card by VSC control program
26

FIG. 6B

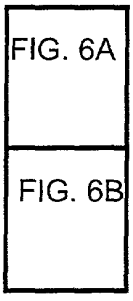
FIG. 6A
FIG. 6B

FIG. 6